

WHAT IS CLAIMED IS:

1. An isolated polynucleotide selected from the group consisting of:

(a) a polynucleotide encoding an NTT polypeptide having the deduced amino acid sequence of Figure 1 or a fragment, analog or derivative of said polypeptide;

(b) a polynucleotide encoding an NTT polypeptide having the amino acid sequence encoded by the cDNA contained in ATCC Deposit No. 75713 or a fragment, analog or derivative of said polypeptide.

2. The polynucleotide of Claim 1 wherein the polynucleotide is DNA.

3. The polynucleotide of Claim 1 wherein the polynucleotide is RNA.

4. The polynucleotide of Claim 1 wherein the polynucleotide is genomic DNA.

5. The polynucleotide of Claim 2 wherein said polynucleotide encodes an NTT having the deduced amino acid sequence of Figure 1.

6. The polynucleotide of Claim 2 wherein said polynucleotide encodes an NTT polypeptide encoded by the cDNA of ATCC Deposit No. 75713

7. The polynucleotide of Claim 1 having the coding sequence for NTT as shown in Figure 1.

8. The polynucleotide of Claim 2 having the coding sequence for NTT deposited as ATCC Deposit No. 75713.

9. A vector containing the DNA of Claim 2.

10. A host cell genetically engineered with the vector of Claim 9.

11. A process for producing a polypeptide comprising: expressing from the host cell of Claim 10 the polypeptide encoded by said DNA.

12. A process for producing cells capable of expressing a polypeptide comprising genetically engineering cells with the vector of Claim 9.

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13. An isolated DNA hybridizable to the DNA of Claim 2 and encoding a polypeptide having NTT activity.

14. A polypeptide selected from the group consisting of (i) an NTT polypeptide having the deduced amino acid sequence of Figure 1 and fragments, analogs and derivatives thereof and (ii) an NTT polypeptide encoded by the cDNA of ATCC Deposit No. 75713 and fragments, analogs and derivatives of said polypeptide.

15. The polypeptide of Claim 14 wherein the polypeptide is NTT having the deduced amino acid sequence of Figure 1.

16. An antibody against the polypeptide of claim 14.

17. An antagonist/inhibitor against the polypeptide of claim 14.

18. An agonist for the polypeptide of claim 14.

19. A method for the treatment of a patient having need of an agonist to NTT comprising: administering to the patient a therapeutically effective amount of the agonist of claim 18.

20. A method for the treatment of a patient having need to inhibit NTT comprising: administering to the patient a therapeutically effective amount of the antagonist/inhibitor of Claim 17.

21. A pharmaceutical composition comprising the polypeptide of Claim 14 and a pharmaceutically acceptable carrier.

22. A method of administering a therapeutically effective amount of the NTT polypeptide comprising providing to a patient DNA encoding said polypeptide and expressing said polypeptide *in vivo*.

23. A method of screening compounds to identify compounds which interact with NTT which comprises:
transforming mammalian cells with a vector containing a polynucleotide encoding NTT;
labelling the natural neurotransmitter of NTT;
incubating the cells, the labelled NTT and a compound;
determining the effectiveness of translocation of the neurotransmitter into the cells by NTT; and

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identifying the compound as being either an antagonist
or an agonist to NTT.

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